

What is claimed is:

1. A safety and arming apparatus for use with a projectile, comprising:
a magnetic sensing apparatus for determining the occurrence of at least two of the
5 events selected from the group consisting of muzzle exit, a predetermined spin rate, and a
predetermined number of turns,
whereby upon the occurrence of the at least two events the fuze is armed.
2. The safety and arming apparatus of claim 1 further including a timer and wherein the
magnetic sensing apparatus is programmed to arm the fuze only if the at least two events
10 occur in a predetermined order in a predetermined time window.
3. The safety and arming apparatus of claim 1 wherein the at least two events are
muzzle exit, spin rate, and turns in a predetermined time window.
4. The safety and arming apparatus of claim 1 wherein the at least two events are
muzzle exit and a predetermined number of turns.
- 15 5. The safety and arming apparatus of claim 1 wherein the at least two events are a
predetermined spin rate and a predetermined number of turns.
6. The safety and arming apparatus of claim 1 wherein the at least two events are
muzzle exit, a predetermined spin rate, and a predetermined number of turns.
7. The safety and arming apparatus of claim 2 further including a setback sensor and
20 wherein the fuze is armed only if setback occurs and the at least two events occur in a
predetermined order.
8. The safety and arming apparatus of claim 7 wherein the fuze is armed only if muzzle
exit occurs within a predetermined time window from when setback occurs.
9. The safety and arming apparatus of claim 1 wherein the fuze is armed only if the spin
25 rate is between a predetermined minimum and maximum spin rate within a predetermined
time window.
10. A method for safing and arming a projectile, the steps comprising:
a) determining the occurrence of at least two of the events selected from the
group consisting of muzzle exit, a predetermined spin rate, and a predetermined number of

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